

REMARKS

Claims 1-5 and 7-34 are pending in the application. This Amendment currently amends claims 1-3, 5, 7-13, 15-17, 19, 20, 22-24, 26-30, and 32-34. No new matter is added to currently amended claims 1-3, 5, 7-13, 15-17, 19, 20, 22-24, 26-30, and 32-34. Claims 1-3, 5, 7-13, 15-17, 19, 20, 22-24, 26-30, and 32-34 are currently amended to merely clarify the subject matter of the claims and in no way narrow the scope of the claims in order to overcome the prior art or for any other statutory purpose of patentability.

Notwithstanding any claim amendments of the present Amendment or those amendments that may be made later during prosecution, Applicant's intent is to encompass equivalents of all claim elements. Reconsideration in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1, 2, 4, 5, 7, 8, 10-18, 20-28, and 30-32 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,848,064 to Cowan. Claims 3, 9, 19, 29, and 33 stand rejected under 35 U.S.C. §103(a) as unpatentable over Cowan in view of U.S. Patent No. 5,842,216 to Anderson et al. (hereinafter, Anderson). Claim 34 stands rejected under 35 U.S.C. §103(a) as unpatentable over Cowan in view of U.S. Patent No. 5,414,751 to Yamada.

This rejection is respectfully traversed in view of the following discussion.

I. THE CLAIMED INVENTION

The claimed invention, as described in claim 1, is directed to a terminal device that comprises a memory including a program storage area including a to-be-used program and a to-be-removed program, according to a selection by a terminal device user, a program executing area, and a memory management table that stores data designating the to-be-used program and the to-be-removed program, in which the data causes the to-be-removed program to be removed from the program executing area.

The claimed invention, as described in claim 5, is directed to a terminal device that comprises a program storage area that stores at least one to-be-used program transferred from a base station, a program executing area that stores a main program and an application program, a memory management table that stores data selected by a terminal device user and

designates at least one of the main program and the application program as a to-be-removed program, in which the data causes the to-be-removed program to be removed from the program executing area, a signal-receiving and -transmitting circuit for receiving and transmitting a signal to the base station, and a central processing unit which controls the program storage area, the program executing area, the memory management table, and the signal-receiving and -transmitting circuit.

The claimed invention, as described in claim 15, is directed to a system for changing programs stored in a terminal device that comprises a base station, a program-transferring device which transfers a to-be-used program to the base station, and a terminal device which downloads the to-be-used program from the program-transferring device through the base station. The terminal device includes a memory including a program storage area including a to-be-used program and a to-be-removed program, according to a selection by a terminal device user, a program executing area, and a memory management table that stores data designating the to-be-used program and the to-be-removed program, in which the data causes the to-be-removed program to be removed from the program executing area.

The claimed invention, as described in claim 22, is directed to a system for changing programs stored in a terminal device that comprises a base station, a program-transferring device which transfers a to-be-used program to the base station, and a terminal device which downloads the to-be-used program from the program-transferring device through the base station. The terminal device includes a program storage area that stores the to-be-used program and a to-be removed program, a program executing area that stores a main program and an application program, and a memory management table that stores data selected by a terminal device user and designates one of the main program and the application program as the to-be-removed program, in which the data causes the to-be-removed program to be removed from the program executing area, and a signal-receiving and -transmitting circuit for receiving and transmitting a signal to the base station, and a central processing unit which controls an operation of the program storage area, the program executing area, the memory management table, and the signal-receiving and -transmitting circuit.

The claimed invention, as described in claim 32, is directed to a method of changing programs stored in a terminal device that comprises storing a plurality of programs in a

program storage area of the terminal device, the plurality of programs comprising a to-be-used program and a to-be-removed program, according to a selection by a terminal device user, and removing the to-be-removed program from the plurality of programs in the program storage area in accordance with data stored in a memory management table in the terminal device that designates each of the plurality of programs as a to-be-used program or a to-be-removed program.

The claimed invention, as described in claim 33, is directed to a method of changing programs stored in a terminal device including a memory that includes a program storage area to store a to-be-used program transferred from a base station, a program executing area including a plurality of programs, and a memory management table that stores data designating each of the plurality of programs stored in the program executing area as to be used or to be removed. The method comprising calculating a check sum of the program storage area that includes the to-be-used program and a to-be-removed program, calculating a check sum of the program executing area, comparing the check sum of the program storage area to the check sum of the program executing area, and transferring the to-be-used program from the program storage area to the program executing area and removing the to-be-removed program from the program executing area in accordance with the data stored in the memory management table, if the check sum of the program storage area is not coincident with the check sum of the program executing area.

The claimed invention, as described in claim 34, is directed to a method of changing programs stored in a terminal device that comprises copying existing and used programs from a program executing area to a program storage area of the terminal device, storing first indicia of the existing and used programs in a memory management table of the terminal device, requesting a change of programs at the terminal device, the change of programs including a to-be-added program and a to-be-deleted existing program, storing second indicia of the change of programs in the memory management table, loading the to-be-added program into the program storage area, and transferring, from the program storage area to the program executing area, the existing and used programs and the to-be-added program, while not transferring from the program storage area, the to-be-deleted existing program, based on the second indicia stored in the memory management table.

An exemplary aspect of the present invention allows a terminal device user to select whether a specific program is necessary, i.e., a to-be-used program, or unnecessary, i.e., a to-be-removed program (Specification, page 11, lines 19-20).

Another exemplary aspect of the present invention allows a terminal device user to remove an unnecessary, i.e., a to-be-removed program from the memory of the terminal device, ensuring that sufficient memory space may be obtained (Specification, page 7, lines 25-27). Hence, additional programs can be readily written into a memory, ensuring the memory resources are effectively used, and a terminal device user can select those programs for functioning of the device (Specification, page 7, line 27 to page 8, line 1).

II. THE PRIOR ART REJECTIONS

A. The Cowan Reference

Cowan discloses a wireless communication system that provides software upgrades, which are wirelessly transmitted, to a mobile terminal based on a determination by a host computer of whether such an upgrade is necessary (col. 2, lines 37-40). During an initial boot-up procedure, each mobile terminal queries the host computer connected to a system backbone to identify a version of operating software, which is stored in the host computer (col. 2, lines 41-44). If the mobile device does not currently have the operating software version identified by the host computer, the mobile device prompts the host computer to download the version stored in the host computer (col. 2, lines 48-51).

When a mobile terminal is turned on, the mobile terminal 36 will detect that the host computer 30 has an upgraded version of operating software and will proceed to request that the upgraded software be downloaded (col. 6, lines 47-51).

If the host computer 30 has a different version of the operating software, the processor 40 of the mobile terminal proceeds to request that the host computer 30 download the new version and the processor 40 goes on to replace the previous operating software which was stored in the memory 50 with the upgraded operating software obtained from the host computer 30 (col. 7, lines 44-51).

In a fail safe mode of downloading a new version, all files of an old version remain saved in the mobile terminal memory until all files belonging to the new version have been

downloaded successfully (col. 12, lines 49-52). Only after all of the files belonging to the new version have been received does the mobile terminal 36 discard the old version of the files (col.12, lines 52-55).

In Cowan, a host computer determines the current version of the operating software to be used for each terminal device. If a request from the terminal device determines that host computer has an updated version of the operating software, the entirety of the updated operating software is downloaded to the terminal device.

In addition, in Cowan's fail safe mode of downloading an updated version of the operating software to the terminal device, it is still the decision by the host computer to update the terminal device's software that results in the old version being deleted.

With respect to independent claims 1, 5, 15, 22, and 32, of the present invention, it is a selection by the terminal device user that enters data into the memory management table of the terminal device, which determines whether a to-be-removed program is removed from a program executing area and not the program transferring device, which presumably would be analogous to Cowan's host computer.

In particular, Cowan does not disclose, teach or suggest at least the features of "A terminal device, comprising: a memory including: a program storage area including a to-be-used program and a to-be-removed program, according to a selection by a terminal device user; ... and a memory management table that stores data designating said to-be-used program and said to-be-removed program, wherein said data causes said to-be-removed program to be removed from said program executing area," as recited in claim 1.

Similarly, Cowan does not disclose, teach or suggest at least the features of "A terminal device, comprising: ... a memory management table that stores data selected by a terminal device user and designates at least one of said main program and said application program as a to-be-removed program, in which said data causes said to-be-removed program to be removed from said program executing area," as recited in claim 5.

Similarly, Cowan does not disclose, teach or suggest at least the features of "said terminal device including: ... a program storage area including a to-be-used program and a to-be-removed program, according to a selection by a terminal device user; ... and a memory management table that stores data ... wherein said data causes said to-be-removed program to

be removed from said program executing area," as recited in claim 15.

Similarly, Cowan does not disclose, teach or suggest at least the features of "said terminal device including: a program storage area that stores said to-be-used program and a to-be removed program; ... and a memory management table that stores data selected by a terminal device user ... in which said data causes said to-be-removed program to be removed from said program executing area," as recited in claim 22.

Similarly, Cowan does not disclose, teach or suggest at least the features of "storing a plurality of programs in a program executing area of said terminal device, said plurality of programs comprising a to-be-used program and a to-be-removed program, according to a selection by a terminal device user; and removing said to-be-removed program from said plurality of programs in said program executing area in accordance with data stored in a memory management table in said terminal device," as recited in claim 32.

For at least the reasons outlined above, Applicant respectfully submits that Cowan fails to disclose, teach or suggest every feature described in claims 1, 5, 15, 22, and 32. Accordingly, Cowan fails to anticipate, or to render obvious, the subject matter of claims 1, 5, 15, 22, and 32, and claims 2, 4, 7, 8, 10-14, 16-18, 20, 21, 23-28, and 30-31, which depend from claims 1, 5, 15, and 22. Withdrawal of the rejection of claims 1, 2, 4, 5, 7, 8, 10-18, 20-28, and 30-32, under 35 U.S.C. §102(b) as anticipated by Cowan is respectfully solicited.

B. The Anderson Reference

The Examiner admits that Cowan fails to expressly disclose the version information comprising a checksum (Office Action, page 8, lines 18-19). The Examiner then cites Anderson for "teach[ing] the use of a checksum as an advantageous alternative to a simple version information, for determining if a data transfer is necessary (see, for example, col. 3, lines 54-62)." (Office Action, page 8, lines 19-21).

Anderson discloses a system in which small data-notification messages are sent to recipients whenever data becomes relevant or changes (Abstract, lines 5-6). Efficiency is guaranteed by transmitting the data itself only when requested by the recipient of a data-notification message (Abstract, lines 6-9). In particular, recipients are alerted to the presence

of, and changes in, data they might use by data notification messages containing a time stamp, the data location, and a checksum (Abstract, lines 9-12).

With respect to the rejection of claims 3, 9, 19, and 29, Anderson does not cure the deficiencies of Cowan as argued above with respect to independent claims 1, 5, 15, 22, and 29, because nowhere does Anderson disclose, teach or suggest a selection by the terminal device user that enters data into the memory management table of the terminal device, which determines whether a to-be-removed program is removed from a program executing area.

In particular, Anderson does not disclose, teach or suggest at least the features of "A terminal device, comprising: a memory including: a program storage area including a to-be-used program and a to-be-removed program, according to a selection by a terminal device user; ... and a memory management table that stores data designating said to-be-used program and said to-be-removed program, wherein said data causes said to-be-removed program to be removed from said program executing area," as recited in claim 1.

Similarly, Anderson does not disclose, teach or suggest at least the features of "A terminal device, comprising: ... a memory management table that stores data selected by a terminal device user and designates at least one of said main program and said application program as a to-be-removed program, in which said data causes said to-be-removed program to be removed from said program executing area," as recited in claim 5.

Similarly, Anderson does not disclose, teach or suggest at least the features of "said terminal device including: ... a program storage area including a to-be-used program and a to-be-removed program, according to a selection by a terminal device user; ... and a memory management table that stores data ... wherein said data causes said to-be-removed program to be removed from said program executing area," as recited in claim 15.

Similarly, Anderson does not disclose, teach or suggest at least the features of "said terminal device including: a program storage area that stores said to-be-used program and a to-be removed program; ... and a memory management table that stores data selected by a terminal device user ... in which said data causes said to-be-removed program to be removed from said program executing area," as recited in claim 22.

With respect to the rejection of claim 33 over Cowan and Anderson, Applicant respectfully submits that Cowan and Anderson, either individually or in combination, fail to

disclose, teach or suggest at least the features of "a terminal device including a memory that includes a program storage area ... a program executing area ... and a memory management table ... the method comprising ... transferring said to-be-used program from said program storage area to said program executing area and removing said to-be-removed program from said program executing area in accordance with said data stored in said memory management table," as recited in claim 33. That is, the present invention discloses three distinct memories within a terminal device including, respectively, the functions of program storage, program execution, and tabular memory management, which allow a to-be-removed program to be removed from the program storage area

For at least the reasons outlined above, Applicant respectfully submits that Cowan and Anderson, either individually or in combination, fail to disclose, teach or suggest every feature of claims 1, 5, 15, 22, and 33. Accordingly, Cowan and Anderson, either individually or in combination, fail to render obvious the subject matter of claims 1, 5, 15, 22, and 33, and claims 3, 9, 19, and 29, which depend from claims 1, 5, 15, and 22, respectively, under 35 U.S.C. §103(a). Withdrawal of the rejection of claims 3, 9, 19, 29, and 33, as unpatentable over Cowan in view of Anderson is respectfully solicited.

C. The Yamada Reference

The Examiner admits that Cowan fails to expressly disclose copying existing and used programs from a second memory to a first memory of said terminal device prior to performing upgrading (Office Action, page 9, lines 18-20). The Examiner then cites Yamada for "teach[ing] copying existing and used programs from a second memory to a first memory of a terminal device and loading an added program into the first memory as part of a software upgrading process (see, for example, col. 4, lines 20-66).

However, as similarly argued above with respect to the rejection of claims 1, 5, 15, 22, and 33 over Cowan, nowhere does Cowan teach or suggest at least the features of "requesting a change of programs by said terminal device ... and transferring, from said program storage area to said program executing area, said existing and used programs and said to-be-added program, while not transferring from said program storage area, said to-be-deleted existing program, based on said second indicia stored in said memory management

table," as recited in claim 34.

Yamada does not cure the deficiencies of Cowan because nowhere does Yamada teach or suggest at least the features of "requesting a change of programs by said terminal device ... and transferring, from said program storage area to said program executing area, said existing and used programs and said to-be-added program, while not transferring from said program storage area, said to-be-deleted existing program, based on said second indicia stored in said memory management table," as recited in claim 34.

For at least the reasons outlined above, Applicant respectfully submits that Cowan and Yamada, either individually or in combination, fail to disclose, teach or suggest every feature of claim 34. Accordingly, Cowan and Yamada, either individually or in combination, fail to render obvious the subject matter of claim 34 under 35 U.S.C. §103(a). Withdrawal of the rejection of claim 34 as unpatentable over Cowan in view of Yamada is respectfully solicited.

III. CONCLUSION

In view of the foregoing, Applicant submits that claims 1-5 and 7-34, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

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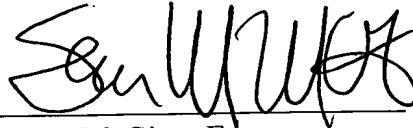
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The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date:

5/19/04

A handwritten signature in black ink, appearing to read "Sean M. McGinn", written over a horizontal line.

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